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**Taking Stock and Looking Forward**

**January 2019 (Part 2)**

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## Pedagogy - Taking Stock and Looking Forward

### Part 2

### January 2019

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## Editorial

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2019 marks the tenth anniversary of a landmark issue of the Journal of Virtual Worlds Research, which was themed on ‘Pedagogy.’ Volume 2 Number 1 of the journal was the fruition of a vision of the late Leslie Jarmon. Dr. Jarmon was a pioneer academic in the use of virtual worlds and immersive environments for learning, and the issue at the time (2009) – was the cutting edge of academic thought on what the affordances of virtual worlds are, and how they could be leveraged for learning.

Much has changed since the heady days of the late 2000s, yet many aspects have proved enduring.

This issue represents the concluding half of an effort to commemorate the occasion and aims to document both the present and emerging state-of-the-art, covering the adoption, design, enactment, scaling and translation of immersive and/or mixed-reality environments for learning, and in other contexts of education.

We believe we have achieved our goal. It is our privilege to present you - in this second and concluding part of a two-part special issue of the Journal - four academic papers which together paint a colorful canvas on just how far we have come, from those early tentative steps during which we explored the nexus between immersive environments and learning a decade ago. The foundations that were laid then have served us well, and have enabled the diversity of evolutionary growth that we see today.

This second part opens with a piece by **Dagleish and Laurenson**, who have titled their paper **Practical learning in Virtual Worlds: confronting literature with health educators’ perspectives**. They describe how Second Life was used to bridge the theory/practice gap in nursing and midwifery training in the United Kingdom. Just as with language learning, the simulative affordances of immersive environments for healthcare education have been well documented over the years, and this

contribution not only shows how far we have progressed in the past decade but also how much work remains to be done.

It is in this spirit that **Gandolfi's and Clements's** paper seems especially timely. **Alternative embodied cognitions at play: evaluation of audio-based navigation in virtual settings via interactive sounds** offers some much-needed insights into how the visually-impaired might be able to explore virtual worlds and immersive environments in potentially richer ways than might be presently thought. In reviewing this work, we were very heartened to know it continues a strong tradition in the virtual world literature on the intersection between special needs education and virtual worlds.

No discussion of embodied cognition would be complete without a foray into the debate between the former and the affordances of Virtual Reality for learning. In this regard, the paper by **Melo, Bentley, McAllister, and Cortez** steps up to the plate. **Pedagogy of Productive Failure: navigating the challenges of integrating VR into the classroom** describes their work in undergraduate writing courses in the American college system, during which the team explored the use of low-cost technologies in facilitating what they have termed as Focussed Associational Thinking.

Our special issue commemorating a decade since the publication of the Journal's seminal issue themed on Pedagogy, concludes with a paper by **Vesisenaho et al. Virtual Reality in education: focus on the role of emotions and physiological reactivity** describes their work with student-teachers in Finland. We chose this paper to end this issue of the Journal because, among other things, the paper includes a discussion on emerging methods for researching the experiences of learners while using VR, such as the use of electroencephalograms for documenting performance and effect. We felt that this is in the spirit of the future-oriented stance of this commemorative issue.

In total, this issue and the one immediately preceding it has presented you with ten papers. As we reviewed and prepared these papers for publication, we were struck by the fact that many of them - from Finland to the Far East - drew their theoretical inspirations from the field of phenomenology. This has been a relatively recent development, and was not present - or at least, explicitly acknowledged - back in 2008 / 2009. We see this as a healthy emergent phenomenon (pun intended) because there is much to be learned from the thinking of Husserl and others with respect to understanding how learners (and their teachers) seek to make sense of virtual worlds and immersive environments.

Finally, a Chinese proverb reads 飲水思源 (yinshui, shiyuan). Loosely translated, it is "when you sip from the stream, remember the source." This commemorative issue, themed on Pedagogy and Learning, stands on the shoulders of those who explored the frontiers and came before. It is presented to you - the reader - in the hope that it may inspire you to take your own work further and define new frontiers.

This two-part issue of the Journal of Virtual Worlds Research is dedicated to the memory and work of the late Leslie Jarmon.